

# SCIENCE

4th Grade

## Test Bank



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# Unit 4: Investigating Light

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## True or False

Indicate whether the following statements are true or false. Rewrite false statements to make them true.

1. Light travels in waves.

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2. All objects that we can see make their own light.

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3. Shadows are cast when light strikes an opaque object.

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4. Light travels in a straight line.

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5. Sometimes light bends slightly around an object, causing shadows to have fuzzy edges. This is an example of reflection.

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6. Limes are green because they absorb green light.

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7. Objects that reflect all colors of light are black.

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## Drawings

1. Draw a wave. Label its crest, trough, and wavelength.
2. Draw a plane mirror and light waves reflecting from it.
3. Draw a concave mirror and light waves reflecting from it.
4. Draw a convex mirror and light waves reflecting from it.
5. Draw a concave lens and light passing through it.

6. Draw a convex lens and light passing through it.

7. Draw (in order) the colors that make up white light. Use crayons, markers, or colored pencils.

8. Draw what an apple would look like behind

a. a transparent object.

b. a translucent object.

c. an opaque object.

## Matching Set A

For each statement, choose the type of object from Answer Box A. Answers may be used once, more than once, or not at all.

- \_\_\_\_\_ 1. A mirror.
- \_\_\_\_\_ 2. An object that blocks light.
- \_\_\_\_\_ 3. An object that allows light to pass through it.
- \_\_\_\_\_ 4. An object that allows some light to pass through it.
- \_\_\_\_\_ 5. Glass.
- \_\_\_\_\_ 6. An object that casts a shadow.
- \_\_\_\_\_ 7. Wax paper.
- \_\_\_\_\_ 8. An object that light bounces off to make an image.
- \_\_\_\_\_ 9. An object that reflects only one color of light.

### Answer Box A

- A. Opaque object
- B. Reflective object
- C. Refractive object
- D. Translucent object
- E. Transparent object

## Matching Set B

For each statement, choose the part of the eye from Answer Box B. Answers may be used once, more than once, or not at all.

- \_\_\_\_\_ 1. Refracts the light that enters the eye.
- \_\_\_\_\_ 2. Tells the brain about color.
- \_\_\_\_\_ 3. The colored part of the eye.
- \_\_\_\_\_ 4. Captures images.
- \_\_\_\_\_ 5. The outer part of the eye that protects the eye.
- \_\_\_\_\_ 6. Helps the eye see in very dim light.
- \_\_\_\_\_ 7. Controls the pupil.
- \_\_\_\_\_ 8. Controls how much light enters the eye.

### Answer Box B

- A. Cone
- B. Cornea
- C. Iris
- D. Lens
- E. Pupil
- F. Retina
- G. Rod

## Essay

How does learning about light help you better appreciate God's work in his creation?

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## Unit 4: Investigating Light

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### True or False

Indicate whether the following statements are true or false. Rewrite false statements to make them true.

1. Light travels in waves.

**True.**

2. All objects that we can see make their own light.

**False. Some objects are visible because they reflect light from other objects.**

3. Shadows are cast when light strikes an opaque object.

**True.**

4. Light travels in a straight line.

**True.**

5. Sometimes light bends slightly around an object, causing shadows to have fuzzy edges. This is an example of reflection.

**False. This is an example of diffraction.**

6. Limes are green because they absorb green light.

**False. Limes are green because they reflect green light.**

7. Objects that reflect all colors of light are black.

**False. Objects that reflect all colors of light are white.**

## Drawings

1. Draw a wave. Label its crest, trough, and wavelength.

**See student text page 119.**

2. Draw a plane mirror and light waves reflecting from it.

**See student text page 131.**

3. Draw a concave mirror and light waves reflecting from it.

**See student text page 132.**

4. Draw a convex mirror and light waves reflecting from it.

**See student text page 132.**

5. Draw a concave lens and light passing through it.

**See student text page 137.**

6. Draw a convex lens and light passing through it.

**See student text page 137.**

7. Draw (in order) the colors that make up white light. Use crayons, markers, or colored pencils.

**Red, orange, yellow, green, blue, indigo, violet.**

8. Draw what an apple would look like behind

- a. a transparent object.

**It would be a clear image.**

- b. a translucent object.

**It would look fuzzy.**

- c. an opaque object.

**It wouldn't be visible.**



## Matching Set A

For each statement, choose the type of object from Answer Box A. Answers may be used once, more than once, or not at all.

- B   1. A mirror.
- A   2. An object that blocks light.
- E   3. An object that allows light to pass through it.
- D   4. An object that allows some light to pass through it.
- E   5. Glass.
- A   6. An object that casts a shadow.
- D   7. Wax paper.
- B   8. An object that light bounces off to make an image.
- A   9. An object that reflects only one color of light.

### Answer Box A

- A. Opaque object
- B. Reflective object
- C. Refractive object
- D. Translucent object
- E. Transparent object

## Matching Set B

For each statement, choose the part of the eye from Answer Box B. Answers may be used once, more than once, or not at all.

- D   1. Refracts the light that enters the eye.
- A   2. Tells the brain about color.
- C   3. The colored part of the eye.
- F   4. Captures images.
- B   5. The outer part of the eye that protects the eye.
- G   6. Helps the eye see in very dim light.
- C   7. Controls the pupil.
- E   8. Controls how much light enters the eye.

### Answer Box B

- A. Cone
- B. Cornea
- C. Iris
- D. Lens
- E. Pupil
- F. Retina
- G. Rod

## Essay

How does learning about light help you better appreciate God's work in his creation?

**Answers will vary but may include that God uses light to produce varieties of colors.**